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EXAMINER

HOANG, PHUONG N

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/087,237

Applicant(s)

KUMAR ET AL.

Examiner

Phuong N. Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

1. Claims 1 – 50 are pending for examination.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 and 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 7 of U.S. Patent No. 10/087,652 (refer as 652). Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer systems comprise substantially the same elements. The difference between the patent no. 652 and this case is the claimed mutable accesses of the attributes in the client state. It would have been obvious to one of ordinary skill in the art in fact that the mutable

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access is necessary for the multi-tasking environment that the lock is necessary to have exclusively access.

3. Claims 1, 14, 26, 29, and 40 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7, 15, and 21 of U.S. Patent No. 10/087,224 (refer as 224). Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer systems comprise substantially the same elements. The differences between the patent no. 224 and this case are the claimed mutable accesses of the attributes in the client state. It would have been obvious to one of ordinary skill in the art in fact that the mutable access is necessary for the multi-tasking environment that the lock is necessary to have exclusively access.

4. Claims 1, 14, 26, 29, and 40 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7, 15, and 21 of U.S. Patent No. 10/087,225 (refer as 225). Although the conflicting claims are not identical, they are not patentably distinct from each other because both computer systems comprise substantially the same elements. The differences between the patent no. 225 and this case are the claimed mutable accesses of the attributes in the client state. It would have been obvious to one of ordinary skill in the art in fact that the mutable access is necessary for the multi-tasking environment that the lock is necessary to have exclusively access.

***Claim Rejections - 35 USC § 101***

1. Claims 1 – 39 are rejected under 35 U.S.C. 101 because they are directed to non-statutory subject matter.

5. Claims 1 – 28 are directed to method steps which can be practiced mentally in conjunction with pen and paper, therefore they are directed to non-statutory subject matter. Specifically, as claimed, it is uncertain what performs each of the claimed system steps. Moreover, each of the claimed steps, inter alia, comparing, tracking, and synchronizing, can be practiced mentally in conjunctions with pen and paper. The claimed steps do not define a machine or computer implemented process [see MPEP 2106]. Therefore, the claimed invention is directed to non-statutory subject matter.

6. Claims 29 - 38 are directed to method steps which can be practiced mentally in conjunction with pen and paper, therefore they are directed to non-statutory subject matter. Specifically, as claimed, it is uncertain what performs each of the claimed method steps. Moreover, each of the claimed steps, inter alia, comparing, tracking, and synchronizing, can be practiced mentally in conjunctions with pen and paper. The claimed steps do not define a machine or computer implemented process [see MPEP 2106]. Therefore, the claimed invention is directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1 – 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The following terms lack proper antecedent basis:

- i. The session data – claims 1, 14, and 26;

- b. The following claim languages are not clearly understood:

- ii. As to claims 1, and 14, lines 6 – 7, it is not clearly understood what session data is referred to (client state of session data or primary state of session data). As examination purpose, examiner treats it as the primary state of session data.

- iii. As to claim 26, lines 4 – 5, it is not clearly understood what session data is referred to (client state of session data or primary state of session data). As examination purpose, examiner treats it as the client state of session data.

***Claim Rejections - 35 USC § 103***

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9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 1, 3 – 7, 9, 10, 13 – 14, 16 – 19, 21 – 22, 25 – 29, 31 – 34, 36, 39 – 40, 42 – 45, 47, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts, US patent no. 6,360,249 in view of Zaiken, US patent no. 5,907,848.**

11. **As to claim 29,** Courts teaches a method comprising the steps of

tracking mutable accesses (lock, col. 8 lines 10 – 65) of a plurality of attributes of a client state of session data (the state information of user session, col. 9 lines 40 – 45), wherein the client state is associated with an application server (servers, col. 5 lines 30 – 35);

mutably accessed attributes (current state information, col. 7 lines 62 – col. 8) with a benchmark version of the client state to determine a subset of modified attributes (changes to the session state), wherein the benchmark version of the client state comprises a previous version of the attributes (session cache 206) in the client state; and

synchronizing a primary state of the session data with the client state according to the subset of modified attributes (the changes to the session state is written back to

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from session cache to global session server 208, col. 8 lines 10 – 65), wherein the primary state is accessible by a plurality of application servers.

Courts teaches a subset of modified attributes getting from the current accessed attributes and the previous version of attributes. However, Courts does not explicitly teach the step of performing an object graph comparison to determine the changes.

Zaiken teaches the step of comparison current and previous version of data in the session (compared the data values stored in the record with previously stored data values, col. 10 lines 1 – 30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Courts and Zaiken's system because Zaiken's comparing step would be necessary for the Courts's system to obtain the changes between the current user state data and previous user state data, and the data in the same session.

12. **As to claim 31**, Courts teaches the step of wherein said synchronizing comprises updating the primary state using the subset of modified attributes (update the changes to the session state from session cache to global session server 208, col. 8 lines 10 – 65).

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13. **As to claim 32**, Courts teaches the step of locking the primary state (lock the global session server, col. 8 lines 10 – 60) for access by a process executing on the application server, wherein, while the primary state is locked for access by the process, other processes on the plurality of application servers cannot access the primary state (it is the capability of locking).

14. **As to claims 33 and 34**, Courts teaches the step comprising of the process receiving a request to release locked (unlock, col. 8 lines 10 – 60) access to the primary state; and the process releasing the locked access to the primary state in response to said request.

15. **As to claim 36**, Court teaches the step comprising of determining differences between the primary state and a benchmark version of the primary state; and synchronizing another instance of the primary state (the changes to the session state is written back to from session cache to global session server 208, col. 8 lines 10 – 65) with the primary state using the determined differences.

16. **As to claim 39**, see discussion for claim 26 above.

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17. **As to claim 40**, it is the software claim of claim 29. See rejection for claim 29 above.

18. **As to claims 42 – 45**, see rejection for claims 31 – 34 above.

19. **As to claim 47**, see rejection for claim 36 above.

20. **As to claim 50**, see rejection for claim 39 above.

21. **As to claim 1**, this is the system claim of claim 29. See rejection for claim 29 above. Further, Court teaches the step of a distributed store (global session server, col. 5 lines 20 – 34 and col. 7 lines 30 col. 8 lines 25), a first one of the application servers (nodes or render engine, fig. 3a and col. 7 lines 30 – col. 8 lines 20), the session data (the state information, col. 5 lines 30 – 33, col. 6 lines 49 – 55), subset of modified attributes (changes to the session state, col. 8 lines 20 – 25).

22. **As to claims 3 - 7**, see rejection for claims 31 - 34 above.

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23. **As to claim 9**, Court teaches the step of the primary state is distributed across a plurality of devices (state information is distributed to a plurality of sessions, col. 6 lines 49 – 55).

24. **As to claims 10 and 13**, see rejection for claims 36 and 39 above.

25. **As to claim 14**, this is the system claim of claim 1. See rejection for claim 1 above.

26. **As to claims 16 - 19**, see rejection for claims 3 - 7 above.

27. **As to claim 21**, see rejection for claim 9 above.

28. **As to claim 22 and 25**, see rejection for claim 10 and 13 above.

29. **As to claim 26**, Court teaches a system, comprising the steps of:

means to lock (lock, col. 8 lines 12 – 25) access to a primary state of session data (the state information, col. 5 lines 30 – 33, col. 6 lines 49 – 55) configured for

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access by a plurality of application servers nodes or render engine, fig. 3a and col. 7 lines 30 – col. 8 lines 20) for a process executing on one of the plurality of application servers, wherein the session data comprises a plurality of attributes (information of user sessions, col. 6 lines 50 – 55);

wherein, while the primary state is locked for the process, other processes cannot access the primary state (it is the concept of locking);

wherein each of the plurality of application servers (nodes or render engine, fig. 3a and col. 7 lines 30 – col. 8 lines 20) comprises a client state of the session (state information of user session, col. 6 lines 50 – 55) data accessible to processes executing within the application server;

means for each of the application servers to:

determine a set of mutably accessed attributes of the client state of the particular application server (current state information for that session, col. 7 lines 60 – 67);

a subset of the set of mutably accessed attributes that are modified in respect to the primary state

means to synchronize the primary state with the client state using the subset of modified attributes (the changes to the session state is written back to from session cache to global session server 208, col. 8 lines 10 – 65).

Courts teaches a subset of modified attributes getting from the current accessed attributes and the previous version of attributes. However, Courts does not explicitly teach the step of determining the changes.

Zaiken teaches the step of comparison current and previous version of data in the session to determine the changes (compared the data values stored in the record with previously stored data values, col. 10 lines 1 – 30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Courts and Zaiken's system because Zaiken's comparing step would be necessary for the Courts's system to determine the changes between the current user state data and previous user state data, and the data in the same session.

30. **As to claim 27**, Courts teaches the step of wherein said means for each of the application servers to determine a set of mutably accessed attributes of the client state of the particular application server comprises tracking mutable accesses of the attributes in the client state (lock, col. 8 lines 10 – 65).

31. **As to claim 28**, Zaiken teaches the steps of wherein said means for each of the application servers to determine a subset of the set of mutably accessed attributes that are modified in respect to the primary state comprises performing an object graph

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comparison (compared the data values stored in the record with previously stored data values, col. 10 lines 1 – 30) of the mutably accessed attributes with a benchmark version of the client state to determine the subset of modified attributes, wherein the benchmark version of the client state comprises a previous version of the attributes in the client state.

**32. Claims 2, 15, 30, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts, US patent no. 6,360,249 in view of Zaiken, US patent no. 5,907,848, in view of Johnson, US patent no. 5,721,943.**

**30. As to claim 30,** Courts and Zaiken do not explicitly teach the step of wherein a mutable access comprises a write access to an attribute.

Johnson teaches a write access to an attribute (write locks, abstract and col. 6 lines 32 – 52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Courts, Zaiken, and Johnson's system because Johnson's write access would be necessary to have the lock to prevent other processes for accessing while updating the session data.

**33. As to claim 41,** see rejection for claim 30 above.

34. **As to claim 2**, see rejection for claim 30 above.

35. **As to claim 15**, see rejection for claim 30 above.

36. **Claims 8, 20, 35, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts, US patent no. 6,360,249 in view of Zaiken, US patent no. 5,907,848, in view of Edwards, US patent no. 6,594,686.**

37. **As to claim 35**, Courts and Zaiken do not explicitly teach the step of a thread.

Edwards teaches the step of a thread (execution thread, col. 5 lines 49 – 60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Courts, Zaiken, and Edward's system because Edwards's thread is well-known necessary for executing process.

38. **As to claim 46**, see rejection for claim 35 above.

39. **As to claim 8**, see rejection for claim 35 above.

40. **As to claim 20**, see rejection for claim 8 above.

41. **Claims 11 – 12, 23 – 24, 37 - 38, and 48 - 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courts, US patent no. 6,360,249 in view of Zaiken, US patent no. 5,907,848, in view of Jackson, Pub no. 20030051145.**

42. **As to claims 37 and 38**, Courts and Zaiken do not explicitly teach the step of performing a binary comparison of the primary state and the benchmark version of the primary state.

Jackson teaches the step of performing a binary comparison (data is sent in binary and compared, col. 3 [0022]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Courts, Zaiken, and Jackson's system because Jackson's binary sending and comparison would be more secured and efficient.

43. **As to claims 48 and 49**, see rejection for claims 37 and 38 above.

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44. **As to claims 11 and 12**, see rejection for claims 37 and 38 above.

45. **As to claims 23 and 24**, see rejection for claims 11 and 12 above.

### ***Conclusion***

46. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ph  
January 7, 2005

  
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